

## Claims

What is claimed is:

1. An insulating, multi-ply packaging material used in connection with the packaging and shipping of goods, comprising:

a first layer of sheet material having a substantially flat surface; and

a second layer of sheet material including flexible bubble wrap material

5 having at least one side having a series of bubbles thereon, each bubble having an outermost surface, said first layer and said second layer being associated together with the outermost surfaces of said bubbles being in contacting, face-to-face, interfacing engagement with said flat surface, forming a multitudinous series of pockets of gaseous media between said bubbles and said flat surface, enhancing the temperature insulating characteristics of the packing material.

2. The insulating, multi-ply packaging material of **Claim 1**, wherein:

said first layer and said second layer are laminated together.

3. The insulating, multi-ply packaging material of **Claim 1**, wherein there is further included:

a further, third layer of sheet material associated with said first and said second layers of sheet material and located along side of said first layer and on the 5 side of said first layer opposite to said second layer, said third layer being a foam material.

4. The insulating, multi-ply packaging material of **Claim 3**, wherein:

said first layer of sheet material is a sheet of plastic film with a metallized surface in contact with the bubbles of said bubble wrap material.

5. The insulating, multi-ply packaging material of **Claim 3**, wherein:

said first layer of sheet material is a plastic film; and  
wherein there is further included:

a foil layer between said plastic film and said bubble wrap material.

6. The insulating, multi-ply packaging material of **Claim 1**, wherein:

said first layer material is a layer of foam material; and  
wherein there if further included:

a foil layer between said foam material and said bubble wrap material..

- 5        7. The insulating, multi-ply packaging material of **Claim 1**, wherein:  
            said associated first and second layers of sheet material form a pouch  
into which the goods are placed for shipment.
8. The insulating, multi-ply packaging material of **Claim 1**, wherein there is  
further included with said pouch:  
            flexible refrigerant material having a series of spaced packets containing  
super-absorbent polymeric material, which when hydrated by a liquid at a signifi-  
5        cantly different temperature than the ambient generates a significant temperature delta  
between the goods and the ambient, the refrigerant wrapped goods being positioned  
in and completely covered by said pouch.
9. The insulating, multi-ply packaging material of **Claim 8**, wherein there is  
further included:  
            a further sheet of bubble wrap material surrounding the pouch with the  
goods located in the pouch; and  
5        a delivery box having substantially flat interior surfaces defining an  
interior into which the goods are placed for shipment, the bubbles of said further  
sheet of bubble wrap material being directed away from said pouch and toward the  
interior surfaces of said box.

10. The insulating, multi-ply packaging material of **Claim 9**, wherein:

the bubbles of said bubble wrap material are in face-to-face engagement with said interior wall surfaces, forming a further multitudinous series of pockets of gaseous media between said bubbles and said substantially flat, interior surfaces of 5 said box, enhancing the temperature insulating characteristics of the combined bubble wrap materials and the walls of said box.

11. The insulating, multi-ply packaging material of **Claim 1**, wherein:

said associated first and second layers of sheet material form a cover; and

wherein there is further included:

5 a delivery box into which the goods are placed for shipment, said cover being placed all about said box, covering it over and protecting it.

12. The insulating, multi-ply packaging material of **Claim 1**, wherein there is further included:

a box having interior wall surfaces, said wall surfaces forming said flat surface which interfaces with said outermost surfaces of said bubbles, said gaseous 5 media pockets being formed between the interior wall surfaces of said box and said bubble wrap material.

**13.** The insulating, multi-ply packaging material of **Claim 1**, wherein there is included one or more of the other innovative unobvious features disclosed in the foregoing specification.

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**"Insulating Packaging Material and Related Packaging System"**  
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**14.** A packaging system for products, comprising:

a corrugated cardboard, packing box having an interior made up of a set  
of flat surfaces; and

an interior layer of bubble wrap packing material having at least one side

5 having a series of bubbles thereon each having an outermost surface, said packaging  
material and the interior of said box being associated together with the outermost  
surfaces of said bubbles being in contacting engagement with said flat surfaces,  
forming a series of pockets of gaseous media between said bubbles and said flat  
surface, enhancing the insulating characteristics of said packing material and said  
box.

**15.** The packaging system of **Claim 14**, in which there is further included:

a cover placed all about said box, covering it over and protecting it.

**16.** The packaging system of **Claim 15**, wherein said cover comprises:

a plastic sheet with a metallized surface, with the metallized surface  
located facing out toward the exterior ambient surrounding the box.

17. The packaging system of **Claim 14**, in which there is further included:  
a first layer of flexible sheet material having a substantially flat surface;

and

a second layer of flexible sheet material including flexible bubble wrap

5 material having at least one side having a series of bubbles thereon, each bubble  
having an outermost surface, said first layer and said second layer being associated  
together with the outermost surfaces of said bubbles being in contacting, face-to-face,  
interfacing engagement with said flat surface, forming a multitudinous series of  
pockets of gaseous media between said bubbles and said flat surface, enhancing the  
10 temperature insulating characteristics of the packing material, said associated layers  
of sheet material used to be placed around the goods, with the goods and the  
surrounding combined, first and second layers being located in the interior of said  
box.

18. The insulating, multi-ply packaging material of **Claim 17**, wherein there  
is further associated with said combined layers of flexible material:

flexible refrigerant material having a series of spaced packets containing  
super-absorbent polymeric material, which when hydrated by a liquid at a signifi-  
5 cantly different temperature than the ambient generates a significant temperature delta  
between its temperature and the ambient, the refrigerant material in association with

said two, filexible layers of sheet material surrounding the goods and located in the interior of said box.

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**"Insulating Packaging Material and Related Packaging System"**  
Inventor: Joseph C. MURRAY

19. A packaging system for a product, comprising:

a multi-ply packaging material, including —

— a first layer of flexible material having a flat surface on its exterior with the product surrounded by said first layer; and

5                   — an exterior layer of flexible, bubble wrap packaging material having at least one side with a series of bubbles thereon, each bubble having an outermost surface, said packaging material and first layer of material being associated together with the outermost surfaces of said bubbles being in contacting engagement with said flat surfaces, forming a series of pockets of gaseous media between said 10 bubbles and said flat surface, enhancing the insulating characteristics of said packing material and said first layer about the product; and

                      a delivery box containing the product with said multi-ply material totally surrounding and encompassing the product.

20. The packaging system of **Claim 19**, in which there is further included:

                      one or more of the other significant, unobvious features disclosed in the foregoing specification.